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C-O-N-F-I-D-E-N-T-I-A-L

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IHC-MM-154
30 June 1970

MEMORANDUM FOR THE RECORD

SUBJECT: Preliminary Comments on Experimental Research Facility For Use By The Intelligence Community

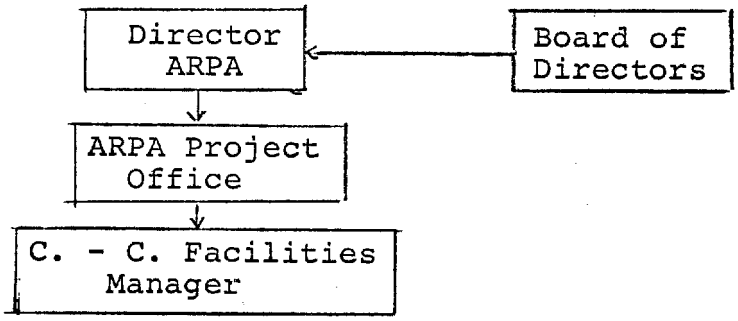
Comments

The first problem with the paper is the Project Management Structure (last page of draft).

According to the paper "full-time daily management of the computer-communication facilities will be performed by the current COINS Manager and his staff" i.e., the Computer-Communications Facilities Manager.

According to the paper "full-time daily management of the experimental intelligence services will be the responsibility of the Project Office" i.e., two people--one from DoD and one from CIA.

After noting the difference in the underlined words (the underlining is mine) we see that the diagram shows the following relationship:



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This gives one the impression that this two-~~hour~~ man ARPA Project Office manager both the Experimental Intelligence Services in the three agencies and the C-C Facilities Manager.

The Board of Directors (three people--~~are~~ one each from CIA, DIA, NSA) are rather remote from the effort since they "provide advice and guidance" to the Director, ARPA.

This does not appear to be a workable arrangement. Though the draft report purports to be an ERF for the Intelligence Community, the DCI, USIB, IHC, and the IHC/SS do not provide the coordinating and evaluating functions they are tasked under NSAM 368 to perform during system development. The ERF is supposed to be a turn-key operation, i.e., the DCI assumes responsibility for the system when it becomes operational. However, the phrase "coordination of the operation of the system...by the DCI" provides less management authority than the DCI is given in the Community Information Handling System (NSAM 368).

The next problem is cost. The cost to ARPA is explicit:

STAT [redacted] over FY71-FY75 (5 years)

The cost to the Intelligence Community is not so readily determined. Some costs are explicit however:

30 people (full-time) from each of three agencies for FY72-FY75 (4 years)=360 man/years at [redacted] per man/year = [redacted] STAT STAT

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The paper calls for "an unspecified number of persons in the use of these experimental facilities" and, though it does not appear in this document, there is obviously a need for training personnel and training facilities. A conservative estimate might be 1/3 at the foregoing i.e.= 120 man/years at [redacted] per man/year= [redacted] STAT STAT

The paper calls for the agencies to pay "60% of the cost of data base construction." One can assume that this cost is not covered by the 480 man/years estimated above. The first question is: by in-house or contractor? On p.9 we see that "ARPA will provide [redacted] for facilities and contracts" and later on that agencies will pay" 60% of cost of data base construction". Therefore the answer seems to be that data base construction will be by contractors and the cost will be shared by ARPA and the agencies. The only source of information in estimating Community costs is the list of four substantive intelligence areas on P. 5. Unfortunately the wording is quite general, e.g., "all-source intelligence relating to the military capabilities of the Soviet and Bloc countries". Another clue is in ARPA's commitment. Their offer of [redacted] includes 40% of the cost of data base development. If one adopts as a rule of thumb that large system development costs are 40%, 40%, 20% on hardware, software, data base respectively then ARPA's STAT STAT

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investment in data base developments would be ~~absent~~ about

STAT [redacted] By inference then the Community's share

STAT would be: [redacted]

Another Community cost that is only alluded to on P. 8 is the manpower investment in software development. Under Phase II, Task 1 we see: "Design (as required at a minimum) and installation of the supervisory and operating systems, and applications software. This will be a joint effort of the intelligence community and contractual effort, which is expected to continue into other phases." This gives rise to another cost not covered hitherto. Clearly the system must have software which will build and maintain the data bases and software to run experiments against those data bases. The intelligence community is to provide support to this effort. The cost is unknown. Another thing to remember is that data bases once established require a support component to keep them up to date with new data and purge them of old data. An example of this activity is the document indexing etc. in CRS. This will not be a contractor activity. Therefore it will be another cost to the Community.

Finally there is the cost of operating [redacted] The STAT

STAT [redacted] does not give an insight into what the costs will be to each agency in the FY72-FY75 time frame. The authors of the ARPA proposal apparently assumed that CIA, DIA, and NSA would install [redacted] in the next STAT year and therefore it would be available for use at no additional cost.

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A summary of costs (explicit, estimated, and unknown) to the Intelligence Community for FY71-FY75 is as follows: STAT

[redacted]

(included in the cost is over 480 man/years of effort)

If we can see a cost of over [redacted] at the beginning STAT of the Project, there is no doubt that costs will run considerably higher. The draft suggests that ARPA funding is ~~fixed~~ fixed at the level shown on p. 10. The community investment is not so explicitly stated.

Conclusion

The proposal as set forth falls under the heading of Subplan VI-Development of Experimental/Trial Information Handling Systems of Attachment A to Memorandum For the President, Subject: NSAM 368 (Intelligence Information Handling System), 22 October 1968. Steps for handling recommendations such as the ARPA proposal are set forth on pp. 35-37 of the referenced memorandum.

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Recommendations

1. ARPA should be informed of the fact that the Preliminary Plan cited above provides a mechanism whereby the DCI may consider and approve proposals for experimental/trial information handling services.
2. The ARPA proposal should be forwarded to the IHC for consideration and comment.
3. Based on IHC recommendations the IHC/SS will prepare, for IHC approval, a recommended action for USIB consideration.

Epiloque

This paper has briefly explored only two aspects of the ARPA proposal, i.e., management and costs. Both elements constitute problems and for different reasons. The positive aspects of the paper, and the benefits to be derived have not been explored due to a shortage of time. These benefits are not inconsiderable:

(a) The proposal provides for the next phase of COINS development.

(b) Management of such a system development by a non-member of the Community has political value.

(c) An infusion of [redacted] and ARPA's considerable experience in network development is a welcome contribution. STAT

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(d) "Dedicated" hardware and software which does not materially effect on-going agency operations makes the proposal attractive.

(e) The requirement for "identical" hardware/software at the three installations eliminates most of the technical problems which plagued COINS.

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Chief, IHC/SS

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